PIONEER

Service Manual

CIRCUIT DESCRIPTIONS
REPAIR & ADJUSTMENTS

ORDER NO.
ARP-830-0

STEREO AMPLIFIER

SA-760(BK)
SA-760

MODEL SA-760 COMES IN SEVEN VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Applicable model		Power requirement	Destination
	SA-760 [BK]	SA-760		
KU	O	–	AC120V only	U.S.A.
HE	O	O	AC220V (240V) switchable	European continent
HB	O	O	AC240V (220V) switchable	United Kingdom
S	O	O	AC110V, 120V, 220V, 240V (Switchable)	General export
KC	O	–	AC120V only	Canada
HEZ	O	O	AC220V (240V) switchable	West Germany
YP	O	–	AC240V only	Australia

- This service manual is applicable to the KU, HE, HB and S types.
- As to the HEZ, YP types, please refer to the additional service manual (ARP-831).
- As to the KC type, please refer to the additional service manual (ARP-870).
- As to the HE, HB and S types, please see page 24.
- SA-760 [BK] is the same as the SA-760 except for the exterior design (color).

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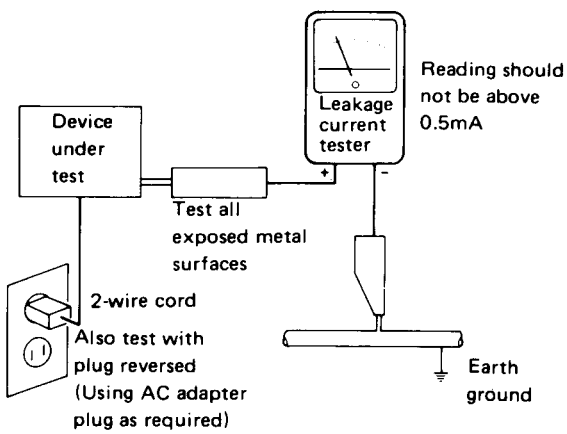
1. SAFETY INFORMATION

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. SPECIFICATIONS

Amplifier Section

Continuous average power output is 50 watts* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz with no more than 0.2% total harmonic distortion.

Continuous Power Output (both channels driven)
- T.H.D. 0.2%, 1 kHz, 8 Ω ..... 60 W per channel
- T.H.D. 0.2%, 20 Hz to 20 kHz, 8 Ω ..... 50 W per channel

DIN, Continuous Power Output at 1 kHz (both channels driven)
- T.H.D. 1%, 1 kHz, 8 Ω ..... 62 W per channel

Input (Sensitivity/Impedance)
- PHONO ..... 2.5 mV/50 kΩ
- TUNER, CD/VIDEO, TAPE PLAY ADAPTOR IN ..... 150 mV/50 kΩ

Phono Overload Level (T.H.D. 0.01%, 1 kHz) ..... 150 mV

Output (Level/Impedance)
- TAPE REC, ADAPTOR OUT ..... 150 mV/2.2 kΩ
- Headphone ..... 67 mV/8 Ω

Frequency Response
- PHONO (RIAA Equalization) ..... 20 Hz to 20 kHz ±0.5 dB
- TUNER, CD/VIDEO, ADAPTOR IN, TAPE PLAY ..... 10 Hz to 70 kHz $^{+1}_{-3}$ dB

Tone Control
- BASS ..... ±10 dB (100 Hz)
- TREBLE ..... ±10 dB (10 kHz)

Loudness Contour(Volume control set at −40 dB position)
- 100 Hz ..... +6 dB
- 10 kHz ..... +3 dB

Hum and Noise (IHF, short circuited, A network)
- PHONO ..... 72 dB
- CD/VIDEO, ADAPTOR IN, TUNER, TAPE PLAY ..... 102 dB

Hum and Noise (DIN, continuous power / 50 mW)
- PHONO ..... 68 dB/60 dB
- CD/VIDEO, ADAPTOR IN, TUNER, TAPE PLAY ..... 84 dB/62 dB

Speker Load Impedance
- A or B ..... 6 — 16 Ω
- A + B ..... 6 — 16 Ω

Miscellaneous

Power Requirements
- HE model ..... a.c. 220 V ∼, 50/60 Hz
- HB, YP models ..... a.c. 240 V ∼, 50/60 Hz
- S models ..... ∼AC 110 V/120 V/220 V/240 V (switchable), 50/60 Hz
- KU, KC models ..... AC 120 V, 60 Hz

Power Consumption
- HE model ..... 400 W
- HB, YP models ..... 400 W
- S models ..... 140 W
- KU model ..... 140 W (UL)
- KC model ..... 290 VA (CSA)

Dimensions ..... 420 (W) x 98 (H) x 273 (D) mm
16-1/2 (W) x 3-7/8 (H) x 10 - 3 /4 (D) in

Weight (without package) ..... 5.6 kg (12 lb 6 oz)

Furnished Parts

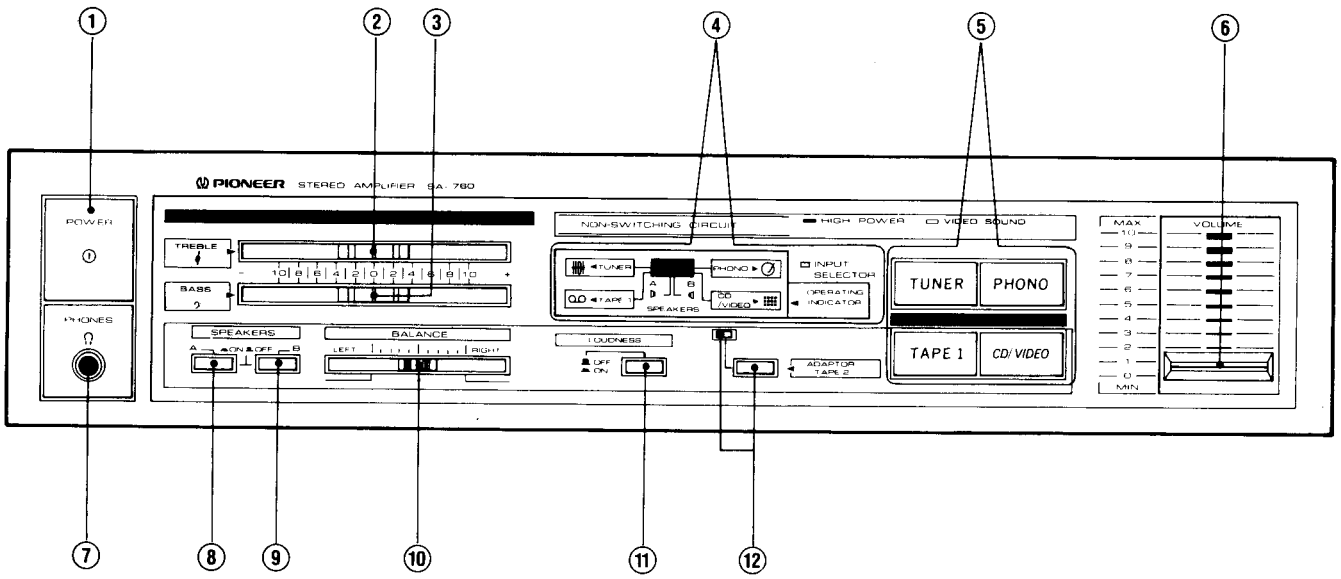
Operating Instructions 1

NOTE:
- *Specifications and design subject to possible modification without notice due to improvements.*
- **Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Claims for Amplifier.*

3. FRONT PANEL FACILITIES

FRONT PANEL

Indications on the actual unit may differ from those in the illustration. However, operating procedures are the same.



① POWER switch

Press to turn power to the unit ON and OFF.
Depressed position (ON):
Power is supplied to the unit.
Released position (OFF):
Power to the unit is disconnected.

② TREBLE tone control

Use to adjust the high-frequency tone.
The central "0" position is the flat (normal) position. When moved to the right, high-frequency tones are emphasized; when moved to the left, high-frequency tones are de-emphasized.

③ BASS tone control

Use to adjust the low-frequency tone. The central "0" position is the flat (normal) position. When moved to the right, low-frequency tones are emphasized; when moved to the left, low-frequency tones are de-emphasized.

④ Indicators

The indicators light to show the positions of the FUNCTION switches.

⑤ FUNCTION switches

Use to select playback source.
[PHONO] — Press when listening to record playback on a turntable.
[TUNER] — Press when listening to AM or FM broadcasts with a tuner.
[CD/VIDEO]— Press when listening to programs from a component connected to the CD/VIDEO terminals.
[TAPE 1] — Press when listening to tape playback with a tape deck.

NOTE:
Function switches should be pressed firmly; otherwise, all the function indicators will light, and no output will be produced. If this occurs, press the desired function switch again.

⑥ VOLUME control

Use to adjust volume level.
Move up to increase volume.
Move down to lower volume.

⑦ PHONES jack

When using headphones, insert their plug into this jack.

⑧ SPEAKERS A selector switch

Use this switch to listen to the speaker systems connected to the SPEAKERS A terminals.
[ON] — Depressd position: Sound is heard from speaker systems.
[OFF] — Released position: No sound is heard from speaker systems. Set to this position when listening with headphones.

⑨ SPEAKERS B selector switch

Use this switch to listen to the speaker systems connected to the SPEAKERS B terminals.
[ON] — Depressed position: Sound is heard from the speaker systems.
[OFF] — Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

⑩ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, move toward the LEFT position and if the left side is louder, move toward the RIGHT position.

⑪ LOUDNESS switch

Use when listening at low volume levels.
[OFF] — Released position: Should normally be left in this position.
[ON] — Depressed position: Boosts low and high frequencies to give added punch to playback even at low volume.

⑫ ADAPTOR/TAPE 2 switch/indicator

Use when there is an adaptor component (graphic equalizer, etc.) or tape deck connected to the ADAPTOR/TAPE 2 terminals.
[OFF] — Released position: When not in use.
[ON] — Depressed position: When using the adaptor component or listening to the tape deck.

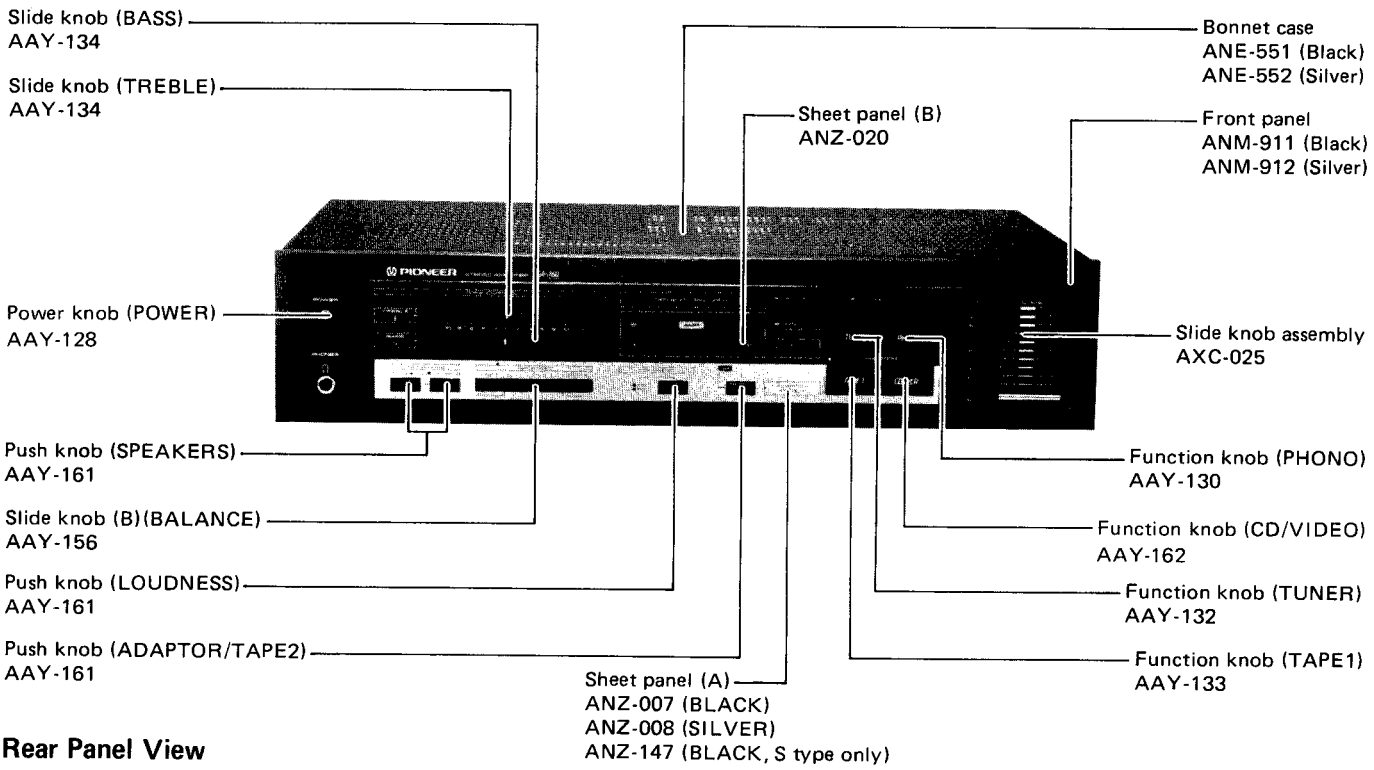
NOTE:
When no connections are made to the ADAPTOR/TAPE 2 terminals, or when they are not in use, be sure to set this switch to the OFF position. (No sound will be heard if it is set to the ON position.)

4. PARTS LOCATION

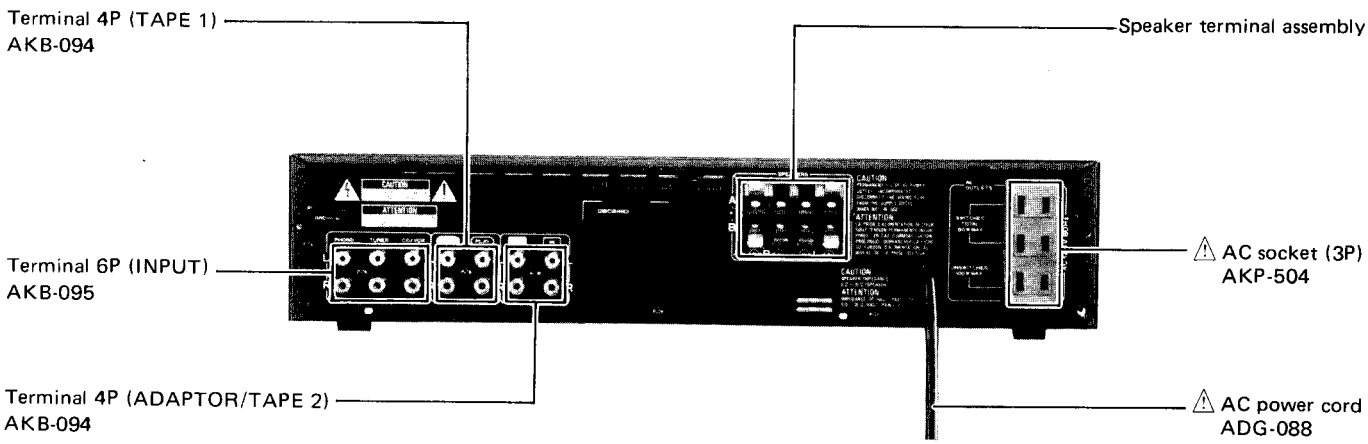
NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ *GENERALLY MOVES FASTER THAN* ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

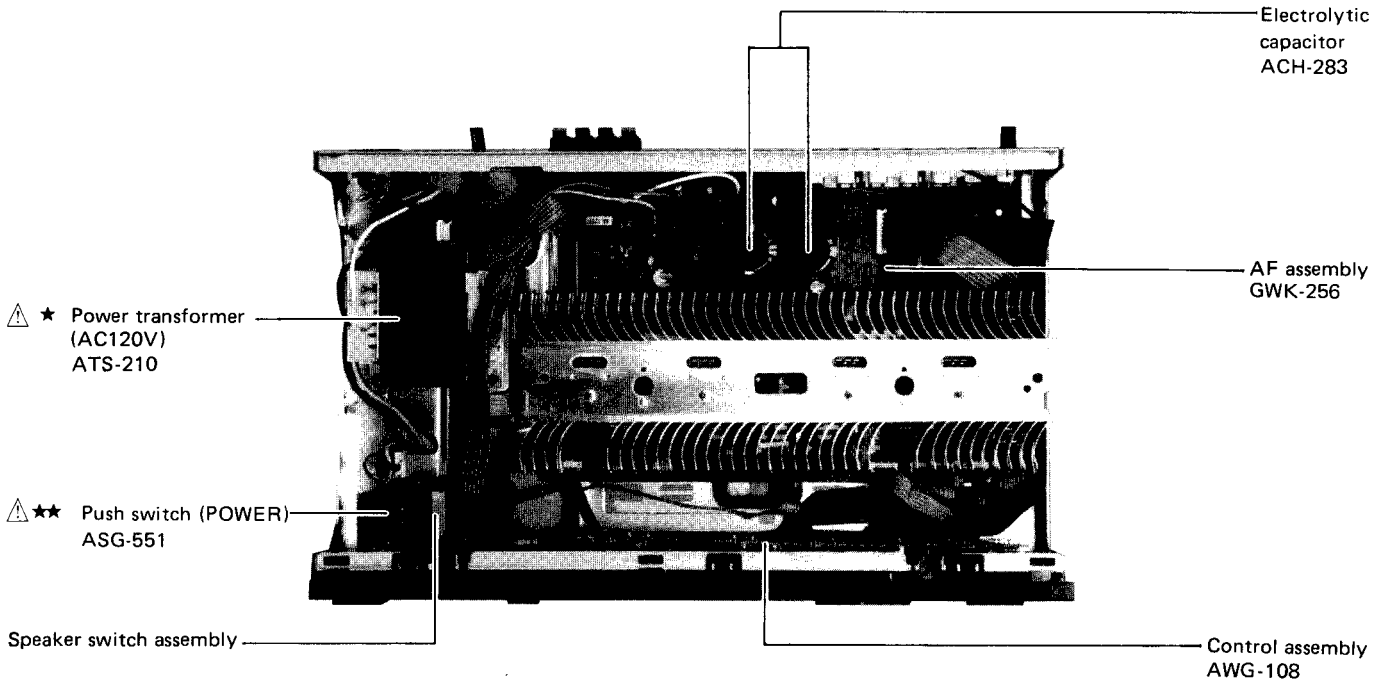
Front Panel View



Rear Panel View

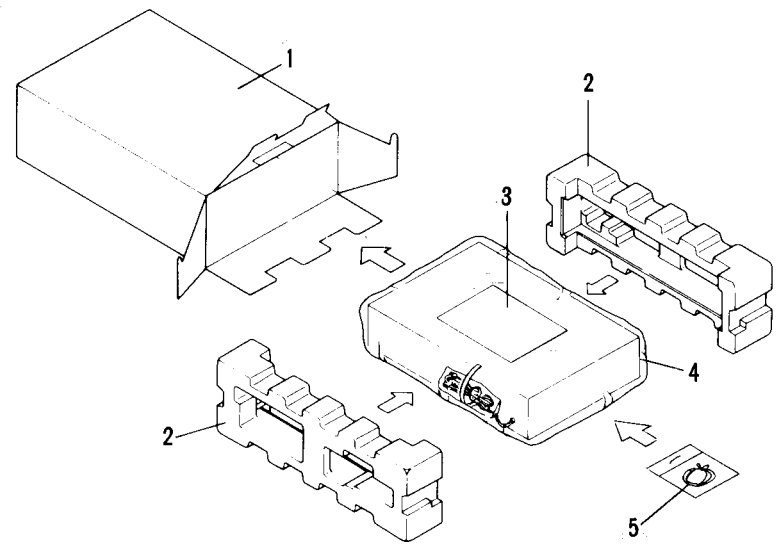


Top View



5. PACKING

Mark	No.	Part No.	Description
	1	AHE-535	Packing case (Black)
		AHE-536	" (Silver)
	2	AHA-340	Front rear pad
	3	ARB-664	Operating instructions (English)
	4	AHG-131	Polyethylene sheet
	5	AEA-057	Cable

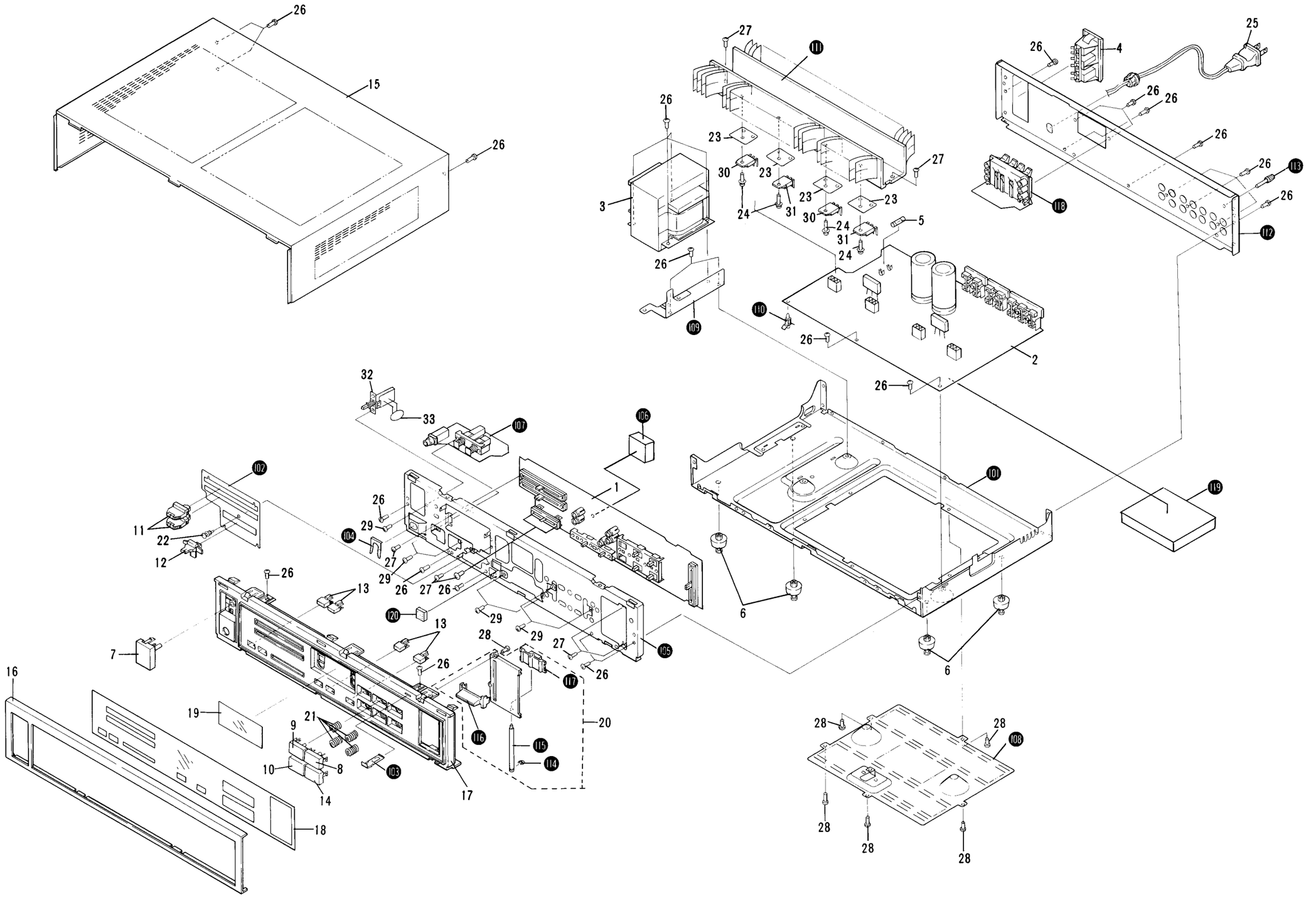


6. EXPLODED VIEW

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Mark	No.	Part No.	Description
	1	AWG-108	Control assembly
	2	GWK-256	AF assembly
⚠ ★	3	ATS-210	Power transformer (AC120V)
⚠	4	AKP-504	AC socket (3P)
⚠ ★★	5	AEK-125	Fuse (4A)
⚠ ★	6	AEC-784	Leg assembly
	7	AAY-128	Power knob (POWER)
	8	AAY-130	Function knob (PHONO)
	9	AAY-132	Function knob (TUNER)
	10	AAY-133	Function knob (TAPE 1)
	11	AAY-134	Slide knob (BASS, TREBLE)
	12	AAY-156	Slide knob (B) (BALANCE)
	13	AAY-161	Push knob (LOUDNESS/ ADAPTOR/TAPE 2, SPEAKERS)
	14	AAY-162	Function knob (CD/VIDEO)
	15	ANE-551	Bonnet case (Black)
		ANE-552	Bonnet case (Silver)
	16	ANM-911	Front panel (Black)
		ANM-912	Front panel (Silver)
	17	ANR-992	Panel base
	18	ANZ-007	Sheet panel A (Black)
		ANZ-147	Sheet panel A (Black, S type only)
		ANZ-008	Sheet panel A (Silver)
	19	ANZ-020	Sheet panel B
	20	AXC-025	Slide knob assembly
	21	ABH-155	Coil spring
	22	AEC-471	Nylon rivet
	23	AEC-818	Mica sheet
	24	ABA-258	Screw
⚠	25	ADG-088	AC power cord
	26	BBZ30P080FZK	Screw (3 x 8)
	27	PMZ20P030FZK	Screw (2 x 6)
	28	VBZ30P060FMC	Screw (3 x 6)
	29	VMZ30P060FMC	Screw (3 x 6)
⚠ ★★	30	2SC2579 (A)	Q1, Q3 Power transistor*
⚠ ★★	31	2SA1104 (A)	Q2, Q4 Power transistor*
		*hfe of Q1—Q4 should have the same value.	
⚠ ★★	32	ASG-551	Push switch (POWER)
⚠	33	ACG-502	Ceramic capacitor (0.01/AC400V)

Mark	No.	Part No.	Description
	101		Chanssis
	102		Blind sheet
	103		Base (GND)
	104		Mount plate
	105		Panel stay
	106		Cushion
	107		Speaker switch assembly
	108		Bottom plate
	109		Frame
	110		P.C.B. holder
	111		Heat sink
	112		Rear panel
	113		Terminal (GND)
	114		E ring
	115		Guide shaft
	116		Slide knob (L)
	117		Slider
	118		Speaker terminal assembly
	119		Cushion
	120		Cushion rubber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101
119
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6
26
13
120
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117
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16
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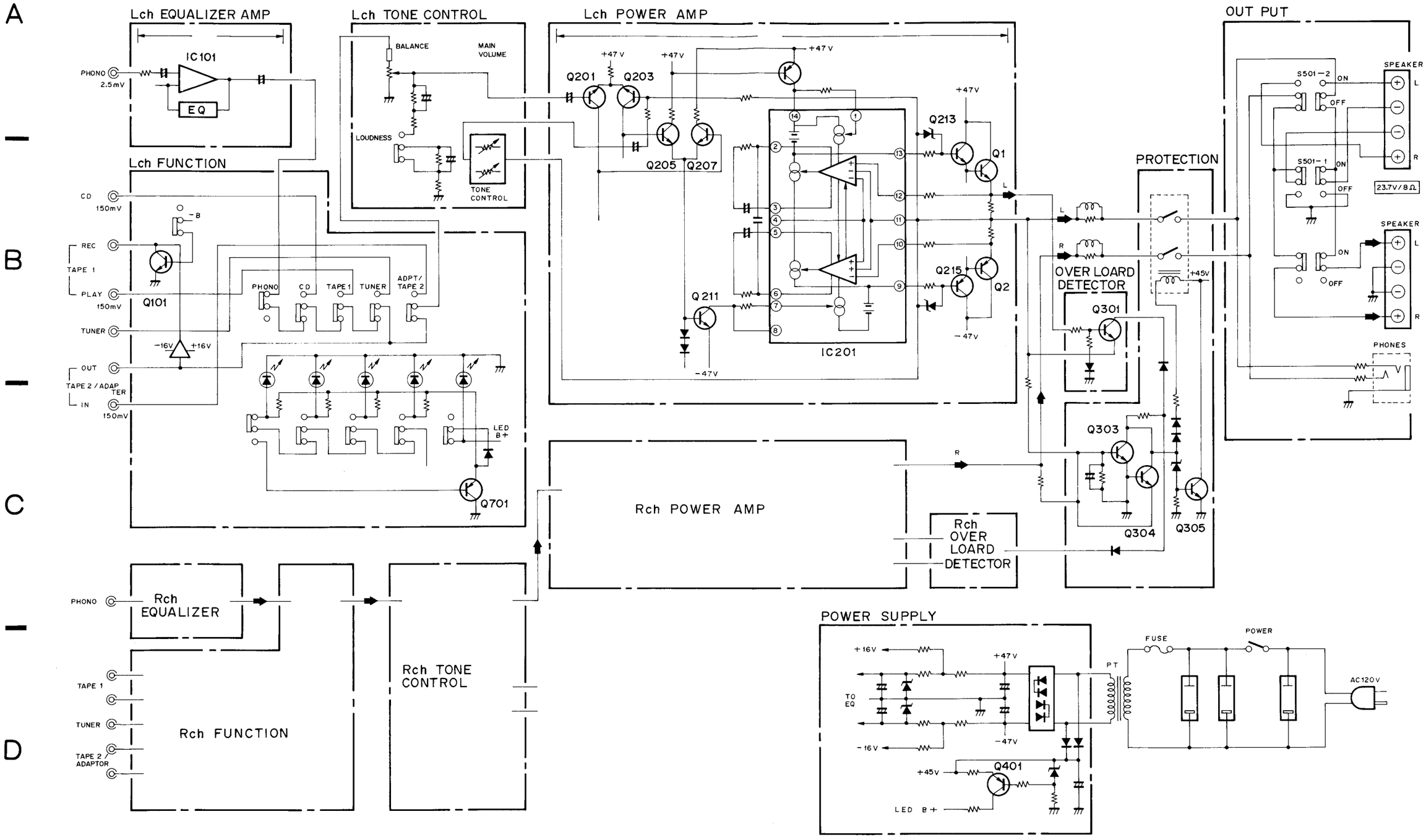
21
10
8
14
103
116
115
114
20
17
18
28
28
108
28
28
28

7. BLO
PHONO
2.5mV
CD
150mV
REC
TAPE 1
PLAY
150mV
TUNER
OUT
TAPE 2 / ADAP
TER
IN
150mV
PHONO
TAPE 1
TUNER
TAPE 2 /
ADAPTOR

7. BLOCK DIAGRAM



8. P.C.BOARDS CONNECTION DIAGRAM

CONTROL ASSEMBLY (AWG-108)

IC701	NJM4558DXC
Q701	2SA933S (2SA1048)
D701, 702	RD16EB (HZ16EB)
D703	RD3.0EB (HZ3.0EB)
D704-707 D710	AEL-388 AEL-420

SPEAKER SWITCH ASSEMBLY

SPEAKER TERMINAL ASSEMBLY

S1 : POWER ASG-551

C1 : ACG-502

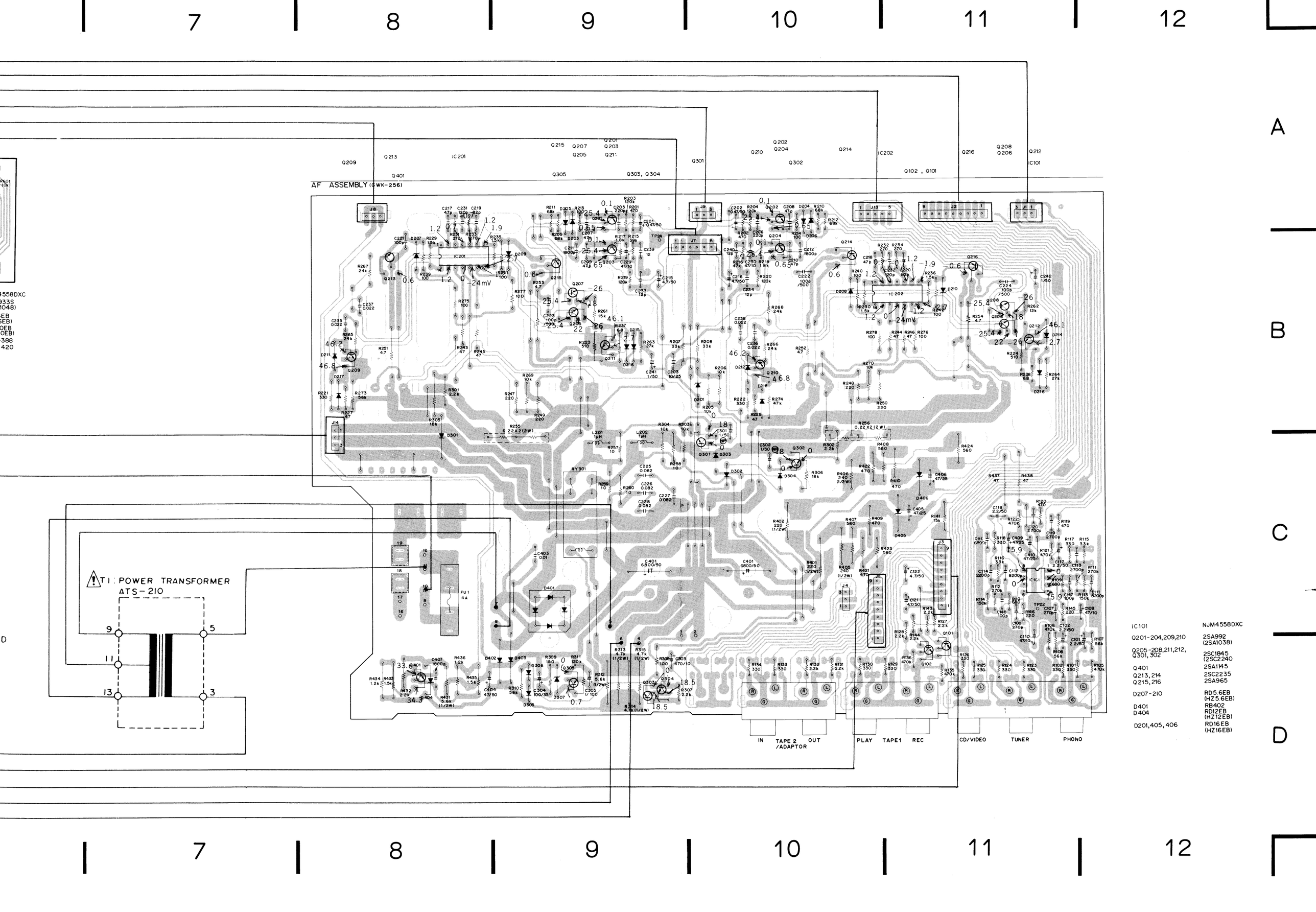
C2 0.01

AC POWER CORD ADG-088

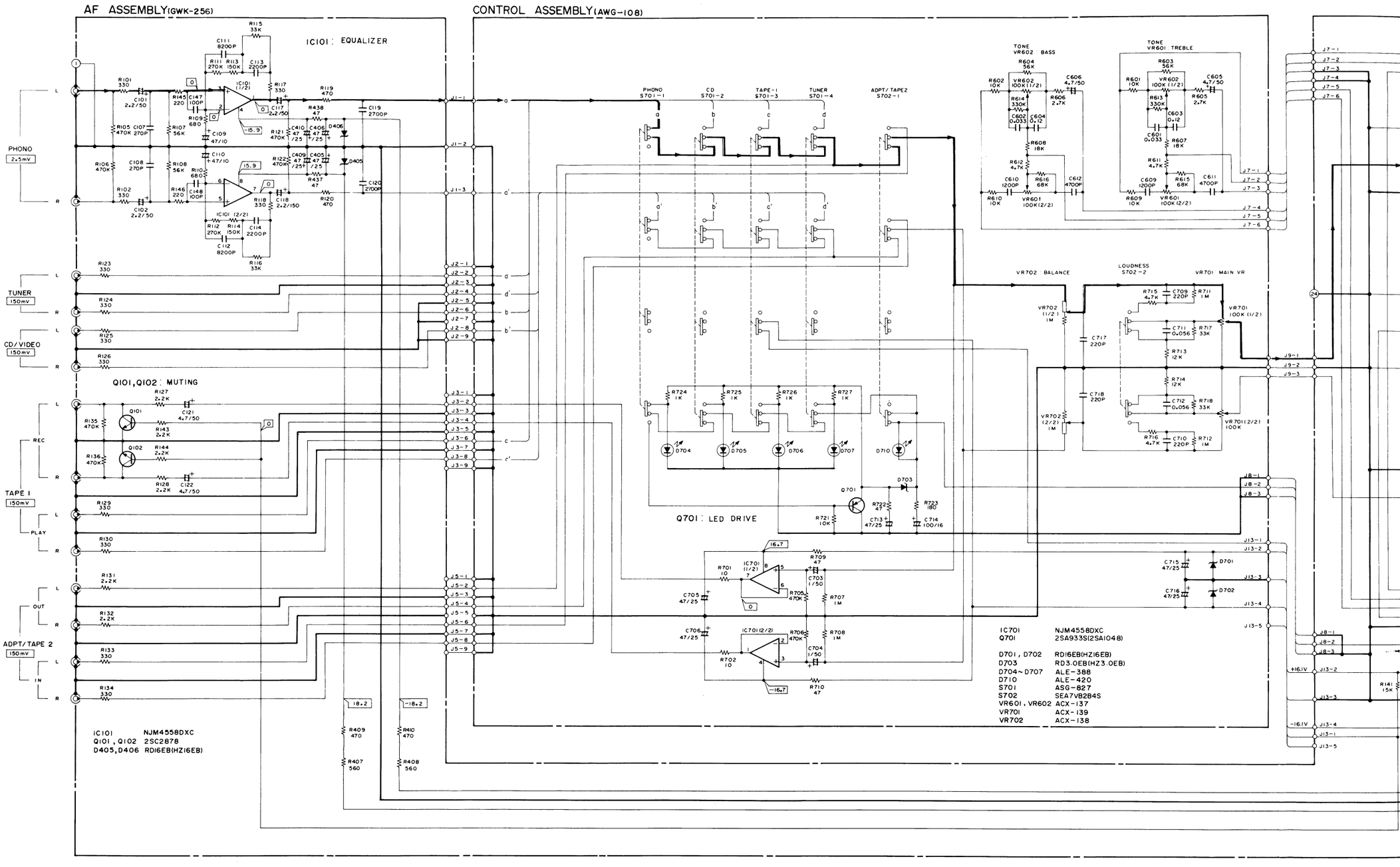
AC 120V 60Hz

3P AC OUTLETS AKP-504

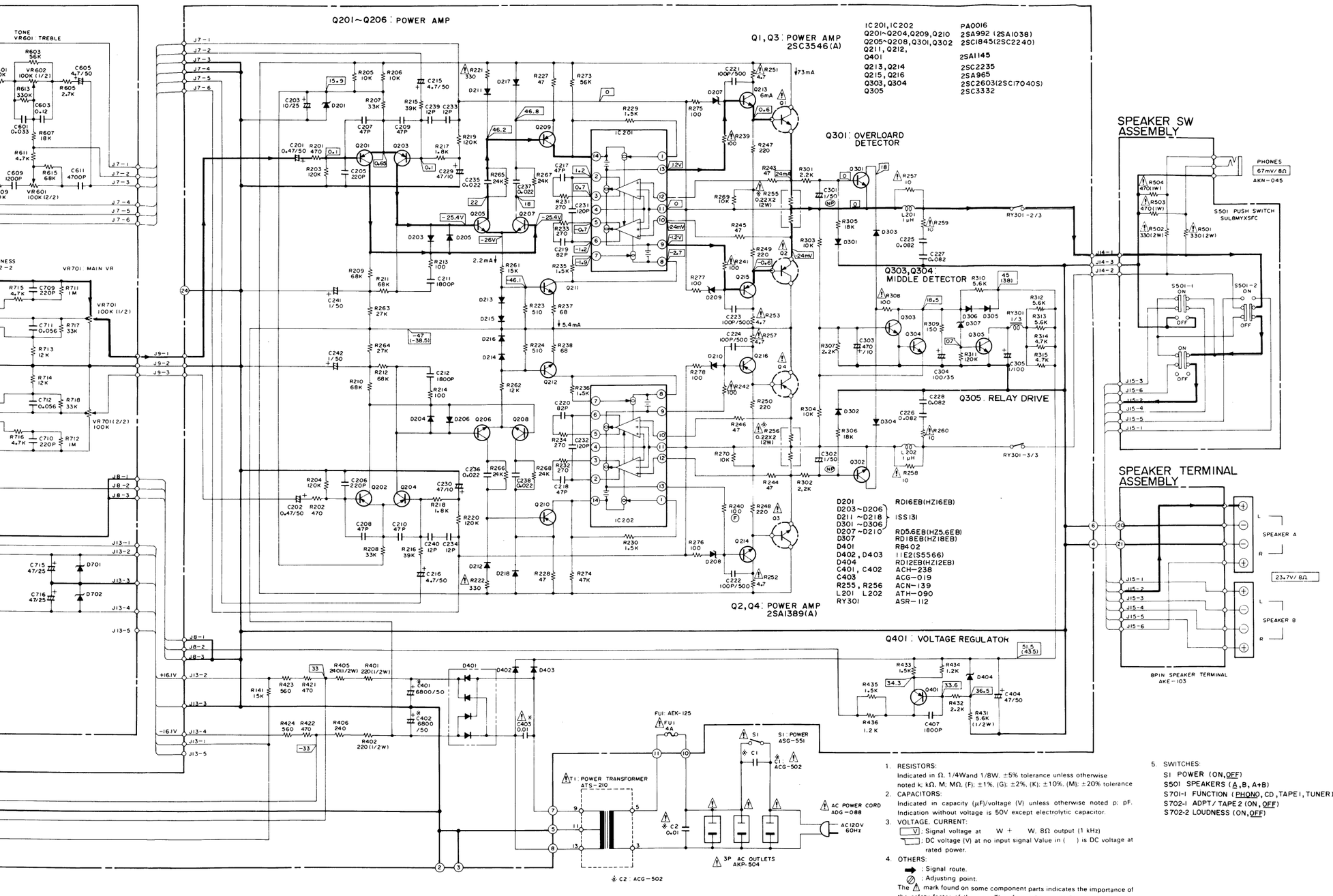
T1 : POWER TRANSF ATS-210


AF ASSEMBLY (GWK-256)
T1 : POWER TRANSFORMER ATS-210
FU1 4A
IC101
Q201-204,209,210
Q205-208,211,212, Q301, 302
Q401
Q213, 214
Q215, 216
D207-210
D401 D404
D201,405,406
NJM4558DXC
2SA992 (2SA1038)
2SC1845 (2SC2240
2SA1145
2SC2235
2SA965
RD5.6EB (HZ5.6EB)
RB402
RD12EB (HZ12EB)
RD16EB (HZ16EB)
IN
TAPE 2 /ADAPTOR
OUT
PLAY
TAPE1
REC
CD/VIDEO
TUNER
PHONO

9. SCHEMATIC DIAGRAM



NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

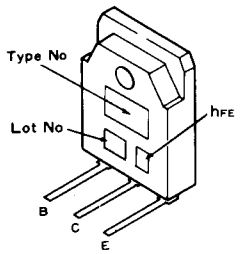


1. RESISTORS:
   Indicated in Ω, 1/4Wand 1/8W. ±5% tolerance unless otherwise noted k: kΩ, M: MΩ, (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% tolerance
2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF. Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE, CURRENT:
   V : Signal voltage at W + W, 8Ω output (1 kHz)
   : DC voltage (V) at no input signal Value in ( ) is DC voltage at rated power.
4. OTHERS:
   ➡ : Signal route.
   ⊘ : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts unmbers.
   The underlined indicates the switch position.

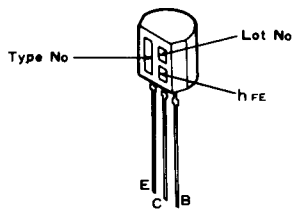
   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.
5. SWITCHES:
   S1 POWER (ON,OFF)
   S501 SPEAKERS (A,B, A+B)
   S701-1 FUNCTION (PHONO, CD, TAPE 1, TUNER)
   S702-1 ADPT/TAPE 2 (ON, OFF)
   S702-2 LOUDNESS (ON, OFF)

External Appearances of Transistor and ICs

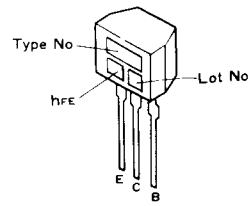
2SA1104 (A)
2SC2579 (A)



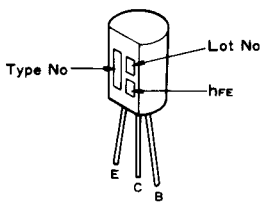
2SC3332



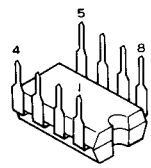
2SC1740S



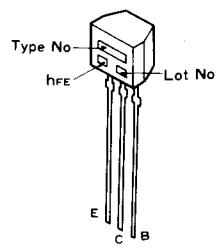
2SA992
2SC1845



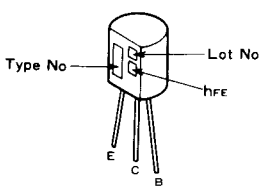
NJM4558DXC



2SC2458



2SA1145
2SC2878



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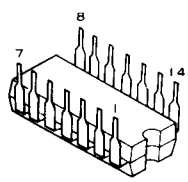
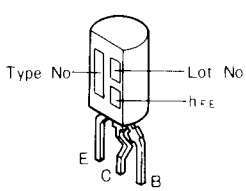
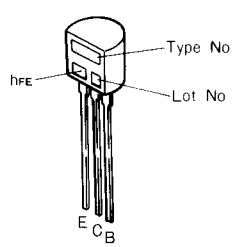


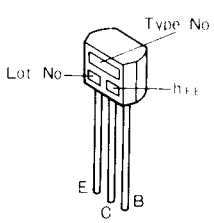
2SC2235 (A)
2SA965 (A)



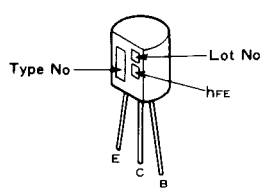
2SA1038
2SC2389



2SC2603



2SA970
2SC2240



10. ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 x 10¹*	*561*	*RD¼PS 5 6 1 J*
47kΩ	*47 x 10³*	*473*	*RD¼PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 x 10¹*	*5621*	*RN¼SR 5 6 2 1 F*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*

  ★★ GENERALLY MOVES FASTER THAN ★.

  This classification shall be adjusted by each distributor because it depends on model number , temperature, humidity, etc.

Miscellaneous Parts List

P.C. BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
	AF Assembly	GWK-256
	Control Assembly	AWG-108
	Speaker Switch Assembly	non supply
	Speaker Terminal Assembly	non supply

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
⚠ ★★	Q2, Q4	2SA1104 (A) O/P/Y*
⚠ ★★	Q1, Q3	2SC2579 (A) O/P/Y *

* hfe of Q1 – Q4 should have the same value.

OTHERS

Mark	Symbol & Description	Part No.
⚠	C2 Ceramic capacitor (0.01/AC400V)	ACG-502
⚠ ★	T1 Power transformer (AC120V)	ATS-210
⚠	AC Socket (AC OUTLETS)	AKP-504
⚠ ★★	FU1 Fuse (4A)	AEK-125
⚠	AC power cord	ADG-088
⚠ ★★	S1 Push switch (POWER)	ASG-551

AF Assembly (GWK-256)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC101	NJM4558DXC
★★	IC201, IC202	PA0016
★★	Q401	2SA1145
★★	Q215, Q216	2SA965(A)
★★	Q209, Q210	2SA992 (2SA1038) (2SA970)
★★	Q201 – Q204	2SA992
★★	Q211, Q212, Q205 – Q208, Q301, Q302	2SC1845 (2SC2240) (2SC2389)
★★	Q213, Q214	2SC2235(A)
★★	Q303, Q304	2SC2603 (2SC1740S) (2SC2458)
★★	Q101, Q102	2SC2878
★★	Q305	2SC3332
★	D401	RB402
★	D404	RD12EB (HZ12EB)
★	D201, D405, D406	RD16EB (HZ16EB)
★	D307	RD18EB (HZ18EB)
★	D207 – D210	RD5.6EB (HZ5.6EB)
★	D203 – D206, D211 – D218, D301 – D306	1SS131
★	D402, D403	11E2 (S5566)

RELAY

Mark	Symbol & Description	Part No.
★★	RY301 Relay	ASR-111 (ASR-112)

COIL & TRANSFORMER

Mark	Symbol & Description	Part No.
	L201, L202 Inductor (1μH)	ATH-090

CAPACITORS

Mark	Symbol & Description	Part No.
⚠	C403 Ceramic capacitor	ACG-019
	C401, C402 (6800/50V)	ACH-283
	C147, C148	CCCSL101J50 (CCDSL101J50)
	C221 – C224	CCCSL101K500 (CCDSL101K500)
	C233, C234, C239, C240	CCCSL120J50 (CCDSL120J50)
	C231, C232	CCCSL121J50
	C205, C206	CCCSL221J50 (CCDSL221J50)
	C107, C108	CCCSL271J50 (CCDSL271J50)
	C207 – C210, C217, C218	CCCSL470J50 (CCDSL470J50)
	C219, C220	CCCSL820J50 (CCDSL820J50)
	C101, C102	CEANL2R2M50
	C301, C302	CEANP010M50
	C201, C202	CEASR47M50
	C305	CEAS010M100
	C241, C242	CEAS010M50
	C203	CEAS100M25
	C304	CEAS101M35
	C117, C118	CEAS2R2M50
	C121, C122, C215, C216	CEAS4R7M50
	C109, C110, C229, C230	CEAS470M10
	C405, C406, C409, C410	CEAS470M25
	C404	CEAS470M50
	C303	CEAS471M10
	C211, C212, C407	CKCYB182K50 (CKDYB182K50)
	C235 – C238	CKCYF223Z50 (CKDYF223Z50)
	C113, C114	CQMA222J50
	C119, C120	CQMA272K50 (CQMA272J50)
	C111, C112	CQMA822J50
	C225 – C228	CQMA823K50 (CQMA823J50)

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
⚠	R255, R256 (0.22Ω x 2)	ACN-131
	R401, R402, R405, R406, R431	RD1/2PM □□□J
⚠	R257 – R260, R301, R302	RD1/4PMFL □□□J
⚠	R221, R222, R239 – R242, R308, R251 – R254, R243 – R250, R275 – R278	RFA1/4PS □□□J
	R205 – R208, R243 – R250, R261 – R270, R273 –R274, R303 – R306, R309, R312 – R315, R407 – R410, R421 – R424, R432 – R436	RD1/4PM □□□J
	Other resistors	RD1/8PM □□□J

OTHERS

Mark	Symbol & Description	Part No.
	Terminal (4P) (TAPE1, ADAPTOR/TAPE2)	AKB-094
	Terminal (6P) (INPUT)	AKB-095
	Transistor socket	AKH-017

Speaker Switch Assembly

SWITCH

Mark	Symbol & Description	Part No.
★★	S501 Push switch (SPEAKERS)	SUL8MYXSFC

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
⚠	R503, R504	RS1LMF471J
⚠	R501, R502	RS2LMF331J

OTHERS

Mark	Symbol & Description	Part No.
	Jack (PHONES)	AKN-045

OTHERS

Mark	Symbol & Description	Part No.
	Terminal strip for 2PL	AKC-128

Speaker Terminal Assembly

OTHERS

Mark	Symbol & Description	Part No.
	Terminal (SPEAKERS)	AKE-103

Control Assembly (AWG-108)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC701	NJM4558DXC
★★	Q701	2SA933S (2SA1048)
★	D704 – D707	AEL-388
★	D710	AEL-420
★	D701, D702	RD16EB (HZ16EB)
★	D703	RD3.0EB (HZ3.0EB)

CAPACITORS

Mark	Symbol & Description	Part No.
	C709, C710, C717, C718	CCCSL221J50 (CCDSL221J50)
	C703, C704	CEAS010M50
	C714	CEAS101M16
	C605, C606	CEAS4R7M50
	C705, C706, C713, C715, C716	CEAS470M25
	C609, C610	CQMA122K50
	C603, C604	CQMA124K50
	C601, C602	CQMA333K50
	C611, C612	CQMA472K50
	C711, C712	CQMA563K50

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
★★	VR601, VR602 (TREBLE, BASS)	ACX-137
★★	VR702 (BALANCE)	ACX-138
★★	VR701 (MAIN)	ACX-139
	R601, R602, R609, R610, R709, R710	RD1/4PM □□□J
	Other resistors	RD1/8PM □□□J

OTHERS

Mark	Symbol & Description	Part No.
★★	S701 Push switch (FUNCTION)	ASG-827
★★	S702 Push switch (ADAPTOR/ TAPE2 LOUDNESS)	SEA7VB2B4S

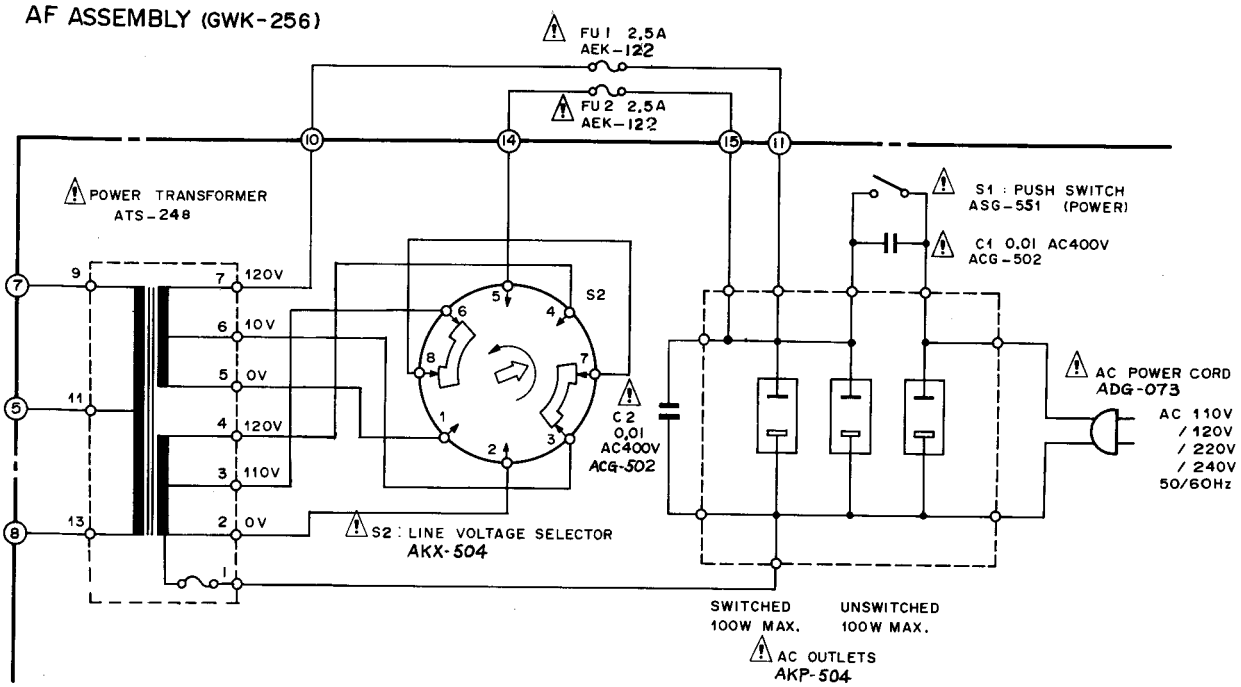
11. FOR HE, HB AND S TYPES

The HE, HB and S types are the same as the KU type with the exception of the following sections.

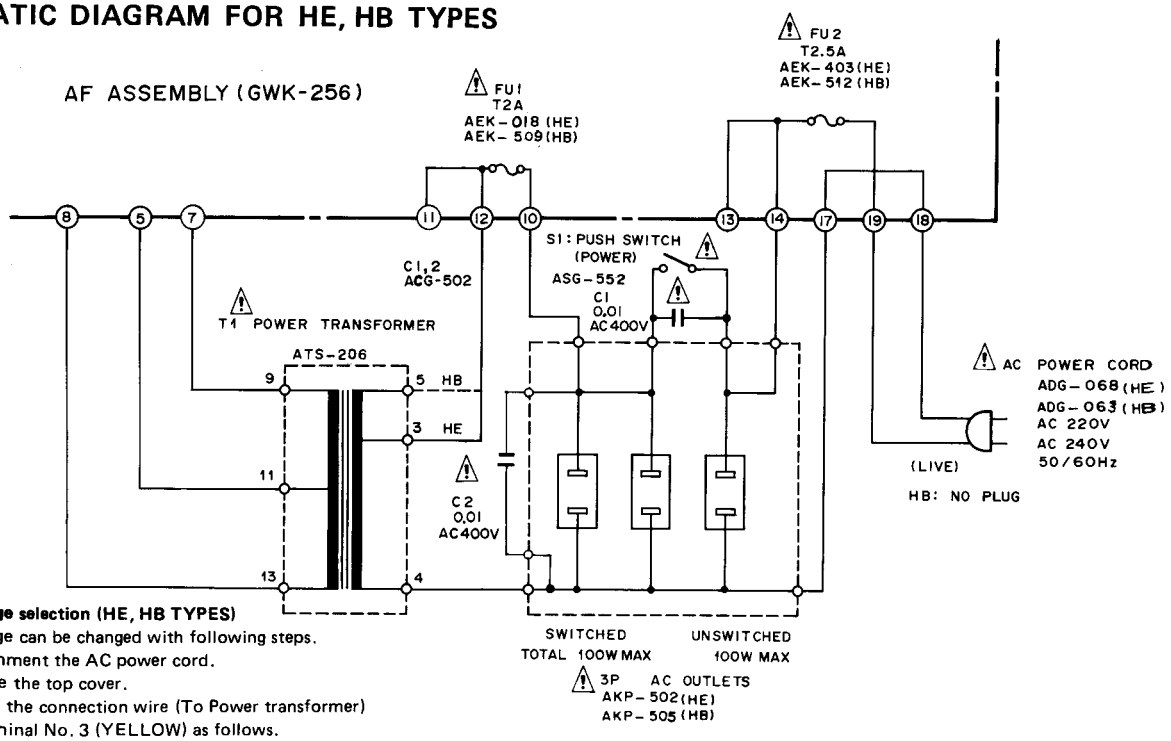
Contrast of Miscellaneous Parts

Mark	Symbol & Description	Part No.			
		KU type	HE type	HB type	S type
⚠ ★	T1 Power transformer (120V)	ATS-210	.....	.....	.....
	(220V/240V)	.....	ATS-206	ATS-206	.....
	(110V/120V/220V/240V)	.....	.....	.....	ATS-248
⚠	AC socket (AC OUTLETS)	AKP-504	AKP-502	AKP-505	AKP-504
⚠★★	S1 Push switch (POWER)	ASG-551	ASG-552	ASG-552	ASG-551
⚠★★	S2 Line voltage selector	.....	.....	.....	AKX-504
⚠★★	FU1 Fuse (4A)	AEK-125	.....	.....	.....
	(T1.25A)	.....	AEK-018	AEK-509	.....
	(2A)	.....	.....	.....	AEK-122
⚠★★	FU2 Fuse (T2.5A)	.....	AEK-403	AEK-512	.....
	(2A)	.....	.....	.....	AEK-122
	Sheet panel A (Black)	ANZ-007	ANZ-007	ANZ-007	ANZ-147
	(Silver)	.....	ANZ-008	ANZ-008	ANZ-008
	Operating instructions (English)	ARB-664	.....	ARB-664	ARB-664
	(Spanish)	.....	.....	.....	ARC-099
	(English/French/Germany/Italian)	.....	ARE-138	.....	.....
⚠	AC power cord	ADG-088	ADG-068	ADG-063	ADG-073

SCHEMATIC DIAGRAM FOR S TYPE



SCHEMATIC DIAGRAM FOR HE, HB TYPES



Line voltage selection (HE, HB TYPES)

Line voltage can be changed with following steps.

1. Descommment the AC power cord.
2. Remove the top cover.
3. Change the connection wire (To Power transformer) of Terminal No. 3 (YELLOW) as follows.

Voltage	Terminal No. 3	Terminal No. 5
220V	Yellow wire	.....
240V	.....	Yellow wire

4. Stick the voltage level on the rear panel.

Part No.	Description
AAX-193	220V level
AAX-192	240V level